

7 October 1998



Communication and Information

***FREQUENCY MANAGEMENT AND
ELECTRONIC COMPATIBILITY***

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: 911 AW/SC (Ronald Bonk)
Supersedes 911 AWI 33-101, 12 September 1997

Certified by: 911 AW/CC (Col F. Baxter Lane)
Pages: 3
Distribution: F

This instruction implements AFPD 33-1, *Command, Control, Communication, and Computer (C4) Systems*. It assigns responsibility and provides procedures and information concerning the management of the electromagnetic spectrum.

SUMMARY OF REVISIONS

This supersedes 911 AWI 33-101, 12 September 1997. It updates, clarifies and streamlines previous guidance.

| 1. Terms Explained:

- 1.1. Electromagnetic Capability. The condition which prevails when telecommunications equipment is performing its individual designed function in a common electromagnetic environment without causing or suffering unacceptable degradation due to unintentional electromagnetic interference to or from other equipment in the same environment.
- 1.2. Electromagnetic Interference. An electromagnetic phenomena that directly constitutes a degradation in the performance of an electronic receiver or system.
- 1.3. Electromagnetic Spectrum. The total range of frequencies over which any form of electromagnetic radiation occurs.
- 1.4. Frequency Allocation. The designation of frequency bands for use in performing specific functions or services.
- 1.5. Frequency Assignment (FA). The process of designating a specific frequency for use at a particular station for special operating conditions.
 - 1.5.1. FA, Regular. An assignment effective for an indefinite period of time.

1.5.2. FA, Temporary. An assignment effective for a period of time greater than 90 days but less than five (5) years.

1.5.3. FA, Short Term. An assignment for a period of time less than 90 days.

1.6. Low-Power Communication Device. A restricted radiation device, exclusive of those employing conducted or guided radio frequency techniques, used for the transmission of signs, signals (including control signals), writing, images, and sounds of intelligence of any nature by radiation of electromagnetic energy. Examples: a wireless microphone, a phonograph oscillator, a radio-controlled garage door opener, radio controlled models.

1.7. Radiation Hazards. RADHAZ is of two types. One deals with effects on the human body of ionizing radiation caused by exposure to high-power transmitters on x-ray producing electronic equipment. The other type deals with the danger of accidentally detonating explosive devices or igniting fuels by means of radio frequency transmission.

1.8. Jamming. The deliberate radiation, re-radiation or reflection of electromagnetic energy with the objective of impairing the use of electrical devices, equipment or systems. For example, the transmission of a tone burst that blocks the transmission of information on a frequency.

1.9. Interference. All causes of unintentional degradation of electronic devices, equipment or systems resulting from electromagnetic energy. Interference may be the result of natural phenomena, frequency spectrum congestion, poorly designed equipment, poor installation/siting practices, or any number of other factors.

2. Responsibilities:

2.1. Installation Commander. Responsible for all electromagnetic radiation emanating from the installation and from those outlying activities hosted by the installation. The installation commander will appoint an installation frequency manager. (The base communication manager is responsible for all communications services including management of radio frequencies).

2.2. The Frequency Manager will:

2.2.1. Make sure that users understand all parameters of their assigned frequencies and verify that usage is in accordance with those parameters.

2.2.2. Keep current frequency assignment records for all radiating devices on the installation and for those outlying activities for which the installation commander is responsible.

2.2.3. Resolve interference problems at the local level if possible. Request electromagnetic compatibility and measurement service through HQ AFRC/SC when necessary.

2.2.4. Satisfy coordination frequency requirements of AFI 33-118, *Radio Frequency Spectrum Management*, for any proposed frequency actions originating at this installation.

2.2.5. Provide frequency management guidance in all stages of planning that involves electromagnetic devices at Pittsburgh ARS, PA (AFRC).

2.2.6. Submit frequency requests for new or revised requirements to HQ AFRC/SC.

2.2.7. Submit a frequency deletion request to HQ AFRC/SC when an assignment frequency is no longer needed.

2.2.8. Submit Meaconing, Intrusion, Jamming and Interference (MIJI) Reports in accordance with AFI 10-707, *Spectrum Interference Resolution Program*.

2.2.9. Act as a single point of contact for all frequency management matters for the host base and tenants' units to assist with frequency actions and requirements.

2.3. Using activity will:

2.3.1. Ensure that the operation of equipment that radiates radio frequency energy complies with the authorization limitations and tolerances.

2.3.2. Ensure that this directive is available and being followed.

2.3.3. Keep records and accomplish reports as prescribed by this instruction.

2.3.4. Review assigned frequencies by 31 March each year, and submit frequency deletion request to the frequency manager when frequencies are no longer required.

2.3.5. Provide the frequency manager with the name of the land mobile radio custodian who will act as the focal point for all frequencies matters.

2.3.6. Report all MIJI incidents to the frequency manager for action.

3. Meaconing, Intrusion, Jamming and Interference (MIJI) Reporting. AFI 10-707 establishes procedures for reporting of MIJI incidents to Air Force equipment or systems which radiate or receive electromagnetic energy. The user of intra base radios must take all possible measures to identify, report, and reduce jamming or interference incidents. Report all incidents to the Base Frequency Manager at ext 8251.

4. Frequency Allocations and Assignments:

4.1. Requests for frequency allocations and assignments will be submitted to the frequency manager. On this installation, the following units or functions are assigned frequencies:

Security Police	Command Post/Disaster	Civil Engineering
Aircraft Maintenance	Fuels/Supply	Transportation

4.2. A list of frequencies assigned is maintained by the frequency manager.

4.3. Submit requests for temporary frequency/frequencies in support of AFRC generated exercises no later than 90 calendar days before use.

5. Requesting Maintenance. The units focal point for frequency matters, LMR (land mobile radio custodian), will report all equipment troubles to 911 Communications maintenance section at ext 8253 or 8251. The maintenance representative will validate the need for repairs and instruct the LMR custodian to obtain contractor service for maintenance with their IMPAC card (International Merchants Purchase Authorization Card).

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